

IBEC (Institute for Bioengineering of Catalonia) is an interdisciplinary research center focused on Bioengineering and Nanomedicine and one of the Severo Ochoa Excellence Centers. IBEC's **mission** is to develop international high quality interdisciplinary research that, while creating knowledge, contributes to making a better quality of life, improving health and creating wealth. A close link with key universities, reference hospitals and corporations, are assets that facilitate achieving the mission.

IBEC was founded in 2005 by the Generalitat de Catalunya, the University of Barcelona (UB) and the Polytechnic University of Catalonia (UPC).

IBEC is located within the **Barcelona Science Park**, with premises of 2.500 square meters, 16 research groups and a team of researchers and support services of 250 people from 20 different countries. www.ibecbarcelona.eu



Predocctoral and Postdoctoral Positions in Organic Chemistry (Ref. OC-PG)

The [Nanoprobes and Nanoswitches](#) group at the **Institute for Bioengineering of Catalonia (IBEC)** is looking for doctoral and postdoctoral candidates to develop research in novel synthetic photoswitches (light-regulated drugs, optopharmacology or photopharmacology).

Tasks and responsibilities:

- Multidisciplinary research on the design and synthesis of light-regulated drugs especially focused on neuronal receptors and peptide inhibitors. The compounds will be characterized using photophysical methods, in vitro cellular assays and in vivo experiments, and will be aimed at recording and manipulating neuronal activity in an all-optical fashion.
- The candidate will be using synthetic photoswitches to modulate the behaviour of an animal using light, and will study the potential applications of phototherapies for a number of neurological disorders.

Requirements for candidates:

- Master Degree in Medicinal Chemistry, Pharmaceutical Sciences, Organic Chemistry or equivalent (for doctoral position).
- PhD Degree in Medicinal Chemistry, Pharmaceutical Sciences, Organic Chemistry or equivalent (for postdoctoral position).
- Experience in organic synthesis: multistep synthesis (liquid & heterogeneous phase), purification techniques (including all chromatographic techniques), analytical methods (polarimetry, NMR, IR & MS).
- Experience in medicinal chemistry or pharmacy, in drug design and development.
- Knowledge of GPCRs or peptide chemistry and molecular modeling methods will be an asset.
- High level of English and good communication skills.
- Ability to maintain accurate and up to date records, and to organize and prioritize own work and research within the project schedule.
- Computer literacy, analytical skills and effective team working.
- Self-critical, capacity to learn and bring knowledge.

Selected references:

- Izquierdo-Serra et al. J. Am. Chem. Soc. 2014, 136:8693
- Bahamonde MI, et al. Bioconjug Chem. 2014, 25:1847.
- Pittolo S, et al. Nat Chem Biol. 2014, 10:813.
- Nevola L, et al. Angew Chem Int Ed Engl. 2013, 52:7704.



IBEC is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission. Thus, there are no restrictions of citizenship or gender and candidates with disabilities are strongly encouraged to apply.